

**BRIEFING
FL PHOSPHATE INITIATIVE
EPA ADMINISTRATOR, RA, AND FL GOVERNOR ACTION ITEMS
AND STATUS REPORT
November 2005**

*****DELIBERATIVE PROCESS*****FOIA EXEMPT*****DO NOT RELEASE*****

Objective: Brief RA on responses to action items from Administrator, RA, and FL Governor meeting in August 2005 and current project status.

☐ **BACKGROUND**

- During 2005 numerous meetings were held to try and address technical, regulatory and financial considerations.
- Briefings for the Acting Deputy Administrator for OSWER in March; FDEP Secretary in June; and the EPA Administrator in July led to a follow-up meeting among the EPA Administrator, EPA Regional Administrator, and FL Governor in August.
- The August 5, 2005, briefing addressed project background; potential threats; Evaluation/Response Criteria; and Issues (briefing attached)
- Six action-items developed from the meeting.

☐ **ACTION ITEMS/RESPONSES**

- Evaluate whether background radiation levels should be higher.

An example of a higher background level mentioned at the meeting was radiation from natural sources such as granite. It was assume that the question of a higher background arose from the question of how naturally occurring radiation is addressed. On average, it is estimated that a person is exposed to approximately 360 mRem of radiation annually. Since elevated levels in the areas of interest are generally expected to be less than this annual dose, the question arises of why would doses less than the annual average a person receives from background levels be of concern.

EPA addresses radiation exposures the same way it does chemical carcinogens (OSWER Dir. No 9200.4-18). As with chemicals, EPA's goal is to address the incremental increase in cancer risk above naturally occurring background levels. The 360 mRem/yr dose is due to natural and man-made sources that the public generally has limited ability to control. As with chemical carcinogens, a more appropriate comparison benchmark would be a comparison to localized background levels of individual radionuclides (e.g., Ra 226...1 pCi/g for central Florida). The current Applicable and Relevant and Appropriate Requirement (ARAR) for Ra²²⁶ is 5 pCi/g above background.

- Consult w/ ATSDR on appropriateness of EPA criteria.

There have been multiple consultations with ATSDR over the years. There are no criteria that have been used by EPA that correspond directly with those



recommended by ATSDR. This is due largely to the different roles of EPA and ATSDR with regard to assessing potential health risks from radiation exposures associated with the phosphate mining industry. EPA's mission, in part, is to address potential risks to human health that could occur from incremental doses of radiation over a long period of time. Conversely, ATSDR's focus is more related to addressing radiation exposures that result in observable health effects. These differing approaches result in recommended dose limits of 15 mRem/yr by EPA vs. 100 mRem/yr by ATSDR.

One area of closer agreement between EPA and ATSDR regarding an acceptable cleanup level is for an acceptable level of Ra^{226} in the soil. An ARAR used historically by EPA for Ra^{226} is 5 pCi/g above background. This generally corresponds to a residential risk level of 10^{-4} .

- Evaluate ORIA and NRC criteria used at Yucca Mtn.

In August 2005, EPA formally introduced radiation standards for the Yucca Mountain radioactive waste disposal facility. The annual dose standard of 15 mRem for the first 10,000 years and 350 mRem, thereafter. Some questions arose as to whether or not these standards may be useful in developing criteria for the Florida Phosphate areas.

In general, the 15 mRem/yr standard corresponds to a 10^{-4} , excess cancer risk for radiation. Similarly, the 5 pCi/g, above background, for radium in the soil, corresponds to a excess cancer risk of approximately 10^{-4} . Although different criteria (i.e., dose vs. concentration), they essentially achieve the same level of protection. The establishment of dose based criteria for the Yucca Mountain facility would not seem to have any bearing on the criteria for the Florida Phosphate area.

- Evaluate basis for Regional cost-estimate.

Questions were raised during the meeting regarding the basis for the \$500,000 per residence cost estimate and whether or not these cost could be reduced.

The initial cost-estimate was based on the assumption that radium contaminated soil that is excavated would be required, either through State or Federal regulations, to be disposed of off-site. However, upon a detail review of the State and Federal regulations for Technically Enhanced, Naturally Occurring, Radioactive Material (TENORM) waste disposal, there are no such requirements. State regulations, which provide the most direction in TENORM disposal, would allow the wastes to be disposed of either in a local Subtitle "D" disposal facility or at gypsum stacks currently operated by the mining industry.

Due to possible local concerns regarding the disposal of the TENORM wastes at Subtitle "D" facilities, and the possible benefits of the wastes being managed at a facility that will be undergoing closure and long-term management in the future, it would seem that disposal of the waste at gypsum stacks would be the most feasible. In addition, it is estimated that disposal of the material at gypsum stacks would be the most economical. It is estimated that disposal of the material at a gypsum stack would reduce the cost per residence cleanup by as

much as 75%. Disposal at a Subtitle "D" facility is estimated to reduce the cost per residence estimated by 50%.

A legal analysis of the disposal requirements for TENORM and a cost comparison is attached.

- Development of Regional desk-statement.

An action item from the August 5, 2005, meeting was the development of a Regional Desk Statement. A draft statement that focuses only on the CERCLIS sites is attached.

- Information on PRPs.

A final action item was the availability of information on Potentially Responsible Parties. The collection of PRP information has been ongoing for the last two years. Below is a summary of the information collect thus far.

A file review was initially conducted to collect ownership information regarding the 21 CERCLA sites in central Florida. This initial review identified 15 viable current and/or previous owners of the mining facilities including the following: Borden Chemical Company; Cargill, Inc.; CF Industries; Coronet Industries, Inc.; Cytec Industries; Estech, Inc.; Exxon Mobile Corporation; Farmland Industries; Freeport-McMoran Copper & Gold, Inc.; IMC Global, Inc.; Mosaic Phosphates Company; U. S. Agri-Chemicals Corporation; U. S. Steel Corporation; W. R. Grace & Co.; and The Williams Companies, Inc. Four additional corporate entities, which have uncertain viability, were also identified during the file review. These corporations include the following: Florida Crushed Stone Company; Hopewell Corporation; Seminole Fertilizer Corporation; and T/A Minerals Corporation.

Title searches of residential properties were conducted in Bartow, Florida at the Polk County Clerk of Courts Office for the Florida Phosphate Mine Initiative. Prior to traveling to the courthouse, six geographic areas within non-mandatory areas in Polk County were selected with the aid of EPA GIS personnel. These non-mandatory areas are mines that had completed operations prior to June 1975. Once in Florida, the Polk County Property Appraisers mapping system was utilized to select subdivisions within the six areas. Two lots were selected in each subdivision to conduct searches back to the mining companies. On the trips, title searches for 17 parcels were completed with an additional four parcels in various stages of completion. The following six mining companies were identified with the completed properties: Armour Agricultural Chemical Company; International Minerals & Chemicals Corporation; Mobil Oil Corporation; USS Agri-Chemicals, Inc.; Virginia-Carolina Chemical Corporation; and W. R. Grace & Company.;

Title searches have also begun on the 21 CERCLA sites. During this trip to Polk County, a title was completed for the South Pierce Works Mine. Corporate entities identified for this mine through the title search include the following: Agrico Chemical Company; American Agricultural Chemical Company; Continental Oil Company; Freeport-McMoran Resource Partners; IMC-Agrico

Company; Industrial Enterprises Inc.; Mosaic Fertilizer, LLC; and Texas Gulf Sulphur Company. In addition, title researches were begun on seven other mines. These activities included determining the location and size of each mine, collecting various maps, and identifying property ownership records.



RECOMMENDED NEXT STEPS

- Develop revised strategy for Radiological "Pilot Study" of 21 CERCLIS sites.
- Develop revised communication strategy based on Pilot Study assessment.
- Continue with development of PRP database.
- Develop draft enforcement strategy.

Brad Jackson/R4/USEPA/US
11/21/2005 02:49 PM

To Randall Chaffins/R4/USEPA/US@EPA, Scott
Sudweeks/R4/USEPA/US@EPA, Derek
Matory/R4/USEPA/US@EPA, Jon
cc Beverly Banister/R4/USEPA/US@EPA, Franklin
Hill/R4/USEPA/US@EPA
bcc

Subject Draft FL Phosphate Breifing Paper for Mr. Palmer

Attached is a draft of a briefing paper on the response to action items from the August 5, 2005, meeting with the Admin., RA, and FL Gov. The briefing also includes some recommended next steps.

With the holiday coming up and desire to have the briefing paper to Mr. Palmer by the end of the month, I decided to send the draft to everyone simultaneously.

Please forward any comments and I'll make the changes and forward a hard copy of the briefing sheet and attachments to Beverly.

If an actual briefing is requested, I can prepare a Power Point presentation from this briefing paper.

Thanks, Brad



brief31.wpd

Brad Jackson/R4/USEPA/US
12/01/2005 02:05 PM

To Beverly Banister/R4/USEPA/US@EPA
cc Franklin Hill/R4/USEPA/US@EPA, Randall
Chaffins/R4/USEPA/US@EPA, Scott
Sudweeks/R4/USEPA/US@EPA, Derek
bcc
Subject Fw: Recommended Approach for Phosphate Mine Area of
Florida

Beverly:

I checked with Stuart Walter and he talked with Betsy about her comment about the rad numbers that could be "considered" for the Phosphate mine area.

According to Stuart, OSRTI is not suggesting that we use the other criteria that would not be compliant with CERCLA risk range and ARARs. What Betsy sent you was just a narrative summary of what we had already briefed you on about a month ago.


I told Stuart that it was my recollection from the meeting that HQ was requested to provide us with concurrence regarding the use of the proposed EPA criteria (i.e., ARAR of 5 pCi/g above background for Ra226).

Just want to give you an update...you may get some additional e:mail from Betsy.

Thanks, Brad

----- Forwarded by Brad Jackson/R4/USEPA/US on 12/01/2005 01:53 PM -----

Brad Jackson/R4/USEPA/US
12/01/2005 07:06 AM

To Beverly Banister/R4/USEPA/US
cc Randall Chaffins/R4/USEPA/US@EPA, Scott
Sudweeks/R4/USEPA/US@EPA, Jon
Richards/R4/USEPA/US@EPA, Derek
Matory/R4/USEPA/US@EPA
Subject Re: Fw: Recommended Approach for Phosphate Mine Area
of Florida 

Beverly:

Not sure what this means.

It seems to be a narrative summary prepared by Stuart Walker of the different assessment/cleanup criteria we have previously presented in tabular form. I assume it's only a summary for background purposes and doesn't represent criteria that HQ approves of us using. For the past several years, HQ has made it clear that any criteria would have to be protective of human health (i.e., in our risk range of 10⁻⁴ to 10⁻⁶) and need to comply with ARARs. That means we could only use EPA's criteria.

Do we need to do anything with this?

Brad

Beverly Banister/R4/USEPA/US

Beverly
Banister/R4/USEPA/US
11/30/2005 08:21 PM

To Randall Chaffins/R4/USEPA/US@EPA, Brad
Jackson/R4/USEPA/US@EPA, Scott
Sudweeks/R4/USEPA/US@EPA

cc

Subject Fw: Recommended Approach for Phosphate Mine Area of
Florida

FYI

----- Forwarded by Beverly Banister/R4/USEPA/US on 11/30/2005 08:20 PM -----

Elizabeth
Southerland/DC/USEPA/US
11/28/2005 03:58 PM

To Mike Cook/DC/USEPA/US@EPA, Beverly
Banister/R4/USEPA/US@EPA
cc Stuart Walker/DC/USEPA/US@EPA, David
Lopez/DC/USEPA/US@EPA, JoAnn
Griffith/DC/USEPA/US@EPA
Subject Fw: Recommended Approach for Phosphate Mine Area of
Florida

Here's a summary of all the different rad cleanup numbers that could be considered for the Florida phosphate mine area. If you have any questions on this, please get back to me.

----- Forwarded by Elizabeth Southerland/DC/USEPA/US on 11/28/2005 03:54 PM -----



Stuart
Walker/DC/USEPA/US
11/23/2005 07:11 PM

To Elizabeth Southerland/DC/USEPA/US@EPA
David Lopez/DC/USEPA/US@EPA, JoAnn
cc Griffith/DC/USEPA/US@EPA, RobinM
Anderson/DC/USEPA/US@EPA
Subject Re: Fw: Re: Fw: Recommended Approach for Phosphate
Mine Area of Florida

Here is the revised version of the one-pager.



phosphate1pager.wpd
1.

Brad Jackson/R4/USEPA/US
12/05/2005 08:10 AM

To Beverly Banister/R4/USEPA/US@EPA
cc Franklin Hill/R4/USEPA/US@EPA, Randall
Chaffins/R4/USEPA/US@EPA, Derek
Matory/R4/USEPA/US@EPA, Scott
bcc
Subject Phosphate Project

Beverly:

Just touching base. I have not received any comments on the briefing paper for Mr. Palmer. Its basically what we have already discussed at your briefing a few weeks ago and with Mike Cook.

I would like some guidance on how you would like to proceed. I assume that once we get Mr. Palmer's approval we will be ready to proceed with the aerial survey of the CERCLIS sites. Should we schedule a briefing for him?

Also, I don't know if I read too much into the briefing w/ Mike Cook, but my sense was that if Mr. Palmer is OK with the plan, then we should proceed. For planning purposes, if we want to complete the survey before the rainy season begins again in late-May of 2006, then we need to get started with the planning soon.

Below is a brief schedule of key milestones to meet a Spring-06 schedule. As you can see, we have a lot to do. If we miss the Spring 06 schedule, then the next available start would be Winter 07 (Jan. 07).

Let me know how you would like to proceed.

Thanks, Brad

Notice to Proceed from Mr. Palmer - 1/06/06
Commitment Notice signed for \$640K for funding that was withdrawn - 1/30/06
Revised WP and Communication Strategy - 2/6/06
Approval of Revised Plans - 2/27/06
State Concurrence with Revised Plans - 2/27/06
IAG Amendment/Funding In-Place - 2/28/06
Implementation of Communication Strategy - 3/6/06
Mobilization/Logistical Field Arrangements - 3/13/06
Initiate Aerial Survey - 4/17/05
Complete Aerial Survey - 5/31/06

Brad Jackson/R4/USEPA/US
12/08/2005 07:06 AM

To Beverly Banister/R4/USEPA/US@EPA
cc arnold.gwendolyn@epa.gov, Derek
Matory/R4/USEPA/US@EPA, Franklin
Hill/R4/USEPA/US@EPA, Jon
bcc

Subject Re: Phosphate Project

History: This message has been replied to.

That's good news. I'll have a PowerPoint presentation available that summarizes the material in the briefing paper I shared with everyone earlier.

Thanks, Brad

Beverly Banister/R4/USEPA/US

Beverly
Banister/R4/USEPA/US
12/07/2005 07:14 AM

To Brad Jackson/R4/USEPA/US@EPA
cc Franklin Hill/R4/USEPA/US, Randall
Chaffins/R4/USEPA/US, Derek Matory/R4/USEPA/US, Scott
Sudweeks/R4/USEPA/US, Jon Richards/R4/USEPA/US,
arnold.gwendolyn@epa.gov
Subject Re: Phosphate Project

We are scheduled to brief Jimmy on January 4th at 2:30pm. We will meet prior to briefing to discuss recommendations and next steps.

Beverly
Beverly H. Banister
Director APTMD
US EPA Region 4
Brad Jackson

From: Brad Jackson
Sent: 12/05/2005 08:10 AM
To: Beverly Banister
Cc: Franklin Hill; Randall Chaffins; Derek Matory; Scott Sudweeks; Jon
Richards
Subject: Phosphate Project

Beverly:

Just touching base. I have not received any comments on the briefing paper for Mr. Palmer. Its basically what we have already discussed at your briefing a few weeks ago and with Mike Cook.

I would like some guidance on how you would like to proceed. I assume that once we get Mr. Palmer's approval we will be ready to proceed with the aerial survey of the CERCLIS sites. Should we schedule a briefing for him?

Also, I don't know if I read too much into the briefing w/ Mike Cook, but my sense was that if Mr. Palmer is OK with the plan, then we should proceed. For planning purposes, if we want to complete the survey

before the rainy season begins again in late-May of 2006, then we need to get started with the planning soon.


Below is a brief schedule of key milestones to meet a Spring-06 schedule. As you can see, we have a lot to do. If we miss the Spring 06 schedule, then the next available start would be Winter 07 (Jan. 07).

Let me know how you would like to proceed.

Thanks, Brad

Notice to Proceed from Mr. Palmer - 1/06/06
Commitment Notice signed for \$640K for funding that was withdrawn - 1/30/06
Revised WP and Communication Strategy - 2/6/06
Approval of Revised Plans - 2/27/06
State Concurrence with Revised Plans - 2/27/06
IAG Amendment/Funding In-Place - 2/28/06
Implementation of Communication Strategy - 3/6/06
Mobilization/Logistical Field Arrangements - 3/13/06
Initiate Aerial Survey - 4/17/05
Complete Aerial Survey - 5/31/06


Brad Jackson/R4/USEPA/US
12/08/2005 11:02 AM

To Beverly Banister/R4/USEPA/US@EPA
cc
bcc
Subject Re: Phosphate Project 

Pam's great...you'll really enjoy her. Maybe I'll let you get attached and then call in some favors (smile).

Beverly Banister/R4/USEPA/US

Beverly
Banister/R4/USEPA/US
12/08/2005 08:28 AM

To Brad Jackson/R4/USEPA/US@EPA
cc
Subject Re: Phosphate Project 

Hello Brad,
Heard a rumor that I would need to consult with you on a few things before I could cleaning services ...
smile. Right now I am negotiable ... what do you need? smile
Beverly

Brad Jackson/R4/USEPA/US
12/12/2005 09:27 AM

To Beverly Banister/R4/USEPA/US@EPA
cc Franklin Hill/R4/USEPA/US@EPA, Randall
Chaffins/R4/USEPA/US@EPA, Scott
Sudweeks/R4/USEPA/US@EPA, Derek
bcc
Subject Phosphate Pre-Briefing

Beverly:

As requested, I've scheduled with you a pre-briefing for Mr. Palmer's Jan. 4, briefing. Gwen scheduled us for 2pm with you on Jan. 3.

Thanks, Brad